

## **ABSTRACT**

The invention described herein provides an improved thermal device having enhanced storage longevity and chemical integrity. The thermal device comprises a flexible plastic containment and activatable thermochemical liquid composition contained therein. The flexible plastic containment is constructed using a multilayer film comprising an outer polymeric barrier layer comprising an oxide coating, and an inner polymeric sealant layer. The thermal device inhibits or prevents water loss through the film, thereby enhancing the chemical integrity of the thermochemical composition within.